# U.S. ARMY SIGNAL CENTER AND FORT GORDON Fort Gordon, Georgia 30905-5180

#### LESSON PLAN

TITLE: Printout Analysis

LEARNING

OBJECTIVE: ACTION: The student will interpret received

operational and traffic printouts, and determine necessary action. The student will also answer

written questions.

CONDITIONS: The student will be given an

operational AN/TYC-39(A), TM 11-5805-790-12-4, and practical exercise 260 ASIZ2/B01-LP1-PE.

STANDARD: Acceptable performance is achieved

when the student correctly

interprets operational and traffic printouts and determines corrective action, in three of four printouts within 30 minutes and correctly answers 7 of 10 questions within 30

minutes.

SAFETY

CONSIDERATIONS: There are no safety considerations for this

lesson.

RISK

ASSESSMENT Low.

TIME: 7 Hours.

RESOURCE NEEDS/

REFERENCES: Operational AN/TYC-39(A), TM 11-5805-790 12-4,

Practical Exercise 260-ASIZ2/BO1-LP1-PE, Overhead

Projector, and Slides.

METHODS OF

INSTRUCTION: Conference, Practical Exercise

NOTES TO INSTRUCTOR:

1. Ensure all training resources are available.

260-ASIZ2/B01-LP1 1 APPROVAL DATE: 17 APR 98
DEVELOPER: MS SULLIVAN

DIV. CHIEF: Jack P. Rondon

- 2. Ensure all safety procedures and practices are followed.
- 3. Ensure all equipment is operational.
- 4. Evaluate students on their ability to perform the learning objective during the practical exercise.
- 5. Save printouts for use during class to reinforce main points.

#### INTRODUCTION:

#### Elapsed Time

- 1. As the operator/supervisor of the AN/TYC-39(A) message switch, it is difficult to operate the message switch unless you know how to interpret received operational and traffic printouts and take the necessary action to ensure proper switch operation.
- 2. This lesson will teach you the skills, knowledge, and procedures necessary for you to accomplish the task of interpreting printouts and determining necessary action. You will learn the procedure to follow when you interpret received service printouts and determine necessary action. You will then practice using the procedures as the operator of the AN/TYC-39(A) message switch until you have demonstrated the ability to correctly interpret printouts and determine corrective action in three of four printouts within 30 minutes. You must also correctly answer 7 of 10 questions within 30 minutes.

3M

3. Let's begin our study by briefly discussing the purpose and use of operational and traffic printouts.

#### BODY:

- 1. Printouts.
  - A. The information contained in operational and traffic printouts provide necessary data for proper interpretation of printouts to determine required operator responsibility (if any).
  - b. Either type may occur during system operation.

- (1) Operational printouts are related to system and subsystem control.
- (2) Traffic printouts are related to message errors and discrepancies.

#### QUESTION:

The information provided in operational and traffic printouts provide necessary data for what use? (ANS: The information contained in operational and traffic printouts provide necessary data for proper interpretation of printouts, and determines operator responsibility.)

5M

- 2. Operational Printouts.
  - NOTE: Show Slide B1L1S1. Refer students to TM 11-5805-790-12-4, paragraph 5-37.
    - a. Printed by the line printer and are displayed on the video display terminal
    - b. Initiated by the system or by the operator.
    - c. Operational printouts provide information relating to:
      - (1) System, subsystem and peripherals.
      - (2) Errors/faults.
      - (3) Actions to be taken and responses to be made.
      - (4) Pass/failure of self checks.
      - (5) Change of equipment function.
      - (6) Results of an operation.
      - (7) Responses to operator input.

#### NOTE: Show Slide B1L1S2.

d. Operational printout reference paragraphs can also be cross-referenced by particular acronym on printouts.

#### NOTE: Show Slide B1L1S3.

e. Each device paragraph, in some cases, also contains a subparagraph index.

#### NOTE: Show Slide B1L1S4.

- f. Each operational printout paragraph format is as follows.
  - (1) Function, command, and reason code

description listed in right hand column. Operational printout format and field (2) descriptions with explanatory information, notes, and operator's responses.

Use actual printouts if available. NOTE:

Sample Operational Printouts. g.

Show Slide B1L1S5. NOTE:

> (1)Equipment Operational Printouts. Provides the operator, supervisor, and/or maintainer with operational statuses of specific devices.

Show Slide B1L1S6. NOTE:

> Cycle Stall Printouts. Provides (2) assistance to operator/supervisor to determine why cycle stall is in effect.

Show Slide B1L1S7. NOTE:

> ACK/NAK Printouts. (3)

NOTE: Show Slide B1L1S8.

- (4)Data Base Printouts.
  - (a) Provides the operator and system controller with up-to-date data base printout.
  - Provides information in the (b) following areas:
    - Switch Parameters.
    - General Collective RI's.
    - $\frac{\frac{1}{2}}{\frac{3}{4}}$ . Message switch connections.
    - RI Line cross reference.
    - <u>5</u>. RI - Terminal phone number cross reference.
    - 6. Line classmarks.
    - 7. Potential classmarks.
    - 8. Appendix - list of acronym.
  - (C) Complete data base book can be printed off line by using "DABA" command. Individual sections or chapters are printed or sent to network controller by using specific DABA commands (discussed

in later lesson).

NOTE: Refer students to TM 11-5805-790-12-4, paragraph 5-53.

- 3. Traffic printouts.
  - a. Traffic printouts are printed by the line printer and are displayed on the video display terminal during system operation and are initiated either by the system or by the operator.
  - b. Traffic printouts provide information relating to traffic and message conditions.

NOTE: Show slide B1L1S9.

- c. Traffic printouts index.
- d. Traffic printout paragraph format is as follows.
  - (1) First sheet contains traffic printout and field description.
  - (2) Second and succeeding pages contain Reason code pages.

NOTE: Show Slide B1L1S10. Refer students to TM 11-5805-790-12-4, para 5-54b.

- e. Printout interpretation.
  - (1) To interpret the meaning of a printout, refer to the format of the particular printout type. Refer to TM index to locate a particular type of printout.

NOTE: Show Slide B1L1S11.

- (2) The right-hand column of the printout illustrates the printout fields with their meanings and the meanings of particular codes.
  - (a) Each field in the format is represented by a mnemonic or lower case letters of the same number of characters as the field in the printout.

- (b) Only those fields that are applicable to the printout reason will be printed.
- (3) The left-hand column has explanatory information, notes, and operator's responses.

NOTE: Show Slide B1L1S12.

(4) The second and succeeding pages will contain more notes and reason code listings.

NOTE: Use actual printouts if available.

f. Sample Traffic Printouts.

NOTE: Show Slide B1L1S13.

(1) PCS Traffic Printout.

NOTE: Show Slide B1L1S14.

(2) BLQ Traffic Printout.

QUESTIONS:

What does the right-hand column of the printout interpretation paragraph provide? (ANS: The right-hand column of the printout illustrates the printout fields with their meanings and the meanings of particular codes.)

What does the left-hand column of the printout interpretation paragraph provide? (ANS: The left-hand column of the printout has explanatory information, notes, and operator's responses.

3H 57M

- 4. Practical exercise.
  - a. During the practical exercise, observe the students on their ability to perform the learning objective; coach, if necessary. Have two students work together on equipment during the practical exercise. Students awaiting or having completed hands-on training will complete their notes until reassigned. Rotate students by roster.
  - b. Prior to class generate or collect applicable printouts from the message switch for use during this practical exercise.

- c. Explanation to students.
  - (1) During the practical exercise, you will interpret received operational and traffic printouts and determine necessary action. You will also answer 10 written questions.
  - (2) When you feel confident that you can correctly interpret printouts and determine corrective action in three of four printouts within 30 minutes, ask one of your instructors to evaluate your performance. When you have answered the 10 written questions have one of your instructors grade the answers.
  - (3) If you do not have any questions, you may start your exercise by reading and following the directions in your practical exercise.
- d. Application by students.
  - (1) Perform the steps as they are sequenced in the application portion of the practical exercise.
  - (2) You will use your TMs to perform each individual step.
- e. Evaluation. Evaluate each student's ability to correctly interpret printouts and determine corrective action in three of four printouts within 30 minutes and correctly answer 7 of 10 written questions.

6H 57M

**SUMMARY:** 

You have now completed your training program on interpreting received service printouts and determining necessary action. As an operator/supervisor of the AN/TYC-39(A) you now realize the importance of printouts in the operation of the message switch. During your future assignments, you will be required to know how to interpret received printouts in order to perform necessary action.

7н

END

This document supports Task Number 113-583-2616, 113-583-2617, 113-583-2618, 113-583-2619, 113-583-2620, and 113-583-2621.

#### U.S. ARMY SIGNAL CENTER AND FORT GORDON Fort Gordon, Georgia 30905-5180

#### LESSON PLAN

TITLE: Supervisor Position Operations

LEARNING

OBJECTIVE: ACTION: Students will identify and use the

supervisor position VDT and

commands. The students will answer written questions on AN/TYC-39A supervisor VDT and commands.

CONDITIONS:

The student will be given TM 11-5805-790-12-3, -4, -5 and practical

exercise 260-ASIZ2/B01-LP2-PE.

STANDARD:

Acceptable performance is achieved when the student correctly performs

8 of 10 supervisory procedures

within 1 hour and correctly answers 14 of 20 questions within 1 hour.

SAFETY

CONSIDERATIONS: There are no safety considerations for this

lesson.

RISK

ASSESSMENT: Low.

RESOURCE NEEDS/

REFERENCES: AN/TYC-39A, TM 11-5805-790-12-3, 4, 5, TV, VCR,

Videocassettes Z2-B01-LP10 (DADI) and Z2-B01-LP11

(DABA), Overhead Projector, and Slides.

METHODS OF

Conference, Practical Exercise INSTRUCTION:

TIME: 10 Hours

#### NOTES TO INSTRUCTOR:

Ensure that all training resources are available. 1.

Ensure that all safety procedures and practices 2. are followed.

1

260-ASIZ2/B01-LP2

APPROVAL DATE: 17 APR 98 DEVELOPER: MS SULLIVAN

DIV. CHIEF: Jack P. Rondon

#### INTRODUCTION:

- 1. In the last lesson, you learned about printout analysis and how to interpret different printouts as they appear in the AN/TYC-39(A). You also found that large portions of the printouts are generated as a result of supervisory operations and commands.
- 2. This lesson will focus on the supervisor VDT and commands of the AN/TYC-39A. The supervisor VDT gives a lot of information about your system. Commands instruct the processor to perform many operations. You will learn about the supervisor and graphic displays. You will also learn more about command categories and their function. You will learn the use of selected SUPE commands and their input formats. Finally, you will answer questions about supervisor operations. You will have 1 hour for switch work and 1 hour to answer questions.

#### BODY:

### Elapsed 1. Supervisor Position. Time

- a. Usual equipment is visual display terminal (VDT) A and line printer unit (LPU) A.
- b. Functions:
  - (1) Interpret displays
  - (2) Use supervisory commands
  - (3) Use operator directives.
  - (4) Interpret on-line operational printouts.
  - (5) Interpret traffic printouts.

# NOTE: Show slide 1. Refer student to TM 11-5805-780-12-3, paragraph 5-5.

- c. Supervisory VDT Display.
  - (1) System Control row gives information about the system.
  - (2) System Alarms row gives information on system alarms.
  - (3) Individual channel status readout rows give information about a particular channel which is alarming or which the operator has requested for display.
  - (4) Supervisory command input/response rows are where the SUPE commands are inputted and where system responses are received.

NOTE: Show slide 2.

- (5) Equipment status summary rows shows the status of all devices by name.
- (6) Channel status summary rows shows the status of each channel in a matrix of intersecting numbers.
- (7) Combined VDT replaces row 2 with the traffic service control area.

NOTE: Show slide 3. Refer student to TM 11-5805-780-12-3, paragraph 5-13. Show film "Z2-B01-LP10; Database Display, DADI, before or after discussing Graphic VDT displays; running time 17:4.28.

- d. Supervisory Graphic VDT Displays.
  - (1) Shows the connectivity of the message switch; the paths through which messages are transmitted or received by the MS.
  - (2) The display can be selected to show the connectivity of the MS to:
    - (a) Other message switches: MS-MS.
    - (b) Circuit switches: MS-CS.
    - (c) AUTODIN switches: MS-DIN.
    - (d) Dedicated terminals MS-TERM.
  - (3) Displays may be printed on the LPU or sent as STAT messages to a predefined list of subscribers.
  - (4) The display shows specific shape and symbols that represent each type of "nodes" or connection.

NOTE: Show Slide 4.

(a) MS node: Hexagon of stars.

NOTE: Show Slide 5.

(b) CS node: Hexagon of asterisks with terminals displayed in rectangles of plus signs (+).

NOTE: Show Slide 6.

(c) DIN mode: Large rectangle of asterisks.

NOTE: Show Slide 7.

- (d) MS-TERM display: Rectangle of plus signs.
- (5) Each node is identified by a MS number or a phone number inside the symbol.
- (6) The nodes are connected, where appropriate, by numbered lines indicating the channels making the connection.
- (7) The RIs in each node are listed in the following order, alphabetically in each group:
  - (a) Top of progression relays.
  - (b) Top of progression individual RIs.
  - (c) Relays which are not top of progression.
  - (d) Individual RIs which are not top of progression.
- (8) Node types may contain more than one screen. Not all of a specific node may be displayed due to memory capabilities but can be seen by using the PRINT or SEND options.
  - (a) PRINT prints on supervisory or combined LPU.
  - (b) SEND sends display in message format to a predefined list of routers.

#### NOTE: Refer to TM 11-5805-790-12-3, para 5-14.

- (9) Display mode procedures.
  - (a) Operating keys: MODE, YES, NO, DISM.
  - (b) To access display mode, press the MODE until "?:MODE=DISPLAY" appears in the upper right-hand corner of the VDU screen; then press the YES key.
  - (c) The system is now in the display mode loop and you may select a display type.
  - (d) Depress the MODE key to cycle through the display types.
  - (e) When the display you need is shown, press the YES key.
  - (f) Use PRINT or SEND as needed.
  - (g) Use DISM key at any time to exit and return to normal supervisory display.

QUESTION: What is the purpose of the Graphic display screen? (ANS: Provides for a graphic means of showing the connectivity of the MS AN/TYC-39(V).)

What is the correct procedure to exit a graphic display screen? (ANS: You can return to the supervisory display mode by pressing DISM key)

NOTE: Refer to TM 11-5805-790-12-3, para 5-15 and 5-16.

1H

- 2. Supervisory commands.
  - a. Instructs the central processor to perform many functions.
  - b. May be from 4 to 160 characters in length. Entered into lines 8 and 9 on the VDT.
  - c. Response is from 13 to 80 characters in length and appears in row 9 or 10 of video display terminal (VDT) following the SUPE command input line.
  - d. May be entered from the SSF-VDT and from the TSF-VDT and COM-VDT following the input of the &SUP command.
  - e. SUPE commands described in this lesson are those which a logged on administrator or supervisor user is authorized to perform; however, some these commands may be performed by more than one user type.
  - f. Supervisory command categories and formats.

NOTE: Refer to TM 11-5805-790-12-3, para 5-17a through o-p.

(1) Channel Management commands - Used to place channels in or out of service, cycle channels, setting/requesting channel sequence numbers, changing Mode V to or from a Mode II line, and to allow/disallow message rejection on a Mode V or Mode II line.

NOTE: Show slide 8.

(a) COSR, LOSR - Place single and groups out of service by channel or

line termination unit (LTU).

(b) CISR, COSR - Place single and groups in service by channel or LTU.

NOTE: Show slide 9.

(c) CCSR, LCSR - cycle an in service channel to out of service and then back to in service by channel or LTU.

NOTE: Show slide 10.

- (d) RCSN Request the channel sequence number of a channel. Must be a channel that uses TI (Transmit inhibit) procedures.
- (e) CM52/CM25 change a Mode V to Mode II and vice versa. Only used in emergency situations.
- (f) RTOV allows/disallows message rejection for garble characters from a Mode II, IV< or V dedicated terminal that utilizes ASCII.
- (g) XMIT brings a Mode II from an X
   (transmit inhibit) state to + (in
   service) state; displayed on
   channel status matrix of the SSF VDT.
- (h) MSMS Initiate/Terminate MS to MS via CS contingency trunk service.

NOTE: Show slide 11. Message diversion commands will be covered in more detail in next lesson. Do a quick overview.

- (2) Message Diversion Sending of a message to other than its intended destination. These commands will be covered in greater detail in a later lesson.
  - (a) Reintroduction process of automatically re-addressing a message by prefixing it with a new header containing a specified RI setup by using TGEN command REIN RI.
    - $\frac{1}{2}$ . GORN.
    - $\overline{2}$ . NORN.
  - (b) Intercept Commands for placing or

releasing messages to the intercept file on the SDU.

- GOIC.
- 2. NOIC.
- Alternate Routing allows rerouting (C) of messages by channel or router to a location other than original destination. Helps to relieve excessive message delivery backlogs.
  - ALTC.
  - ALTR.
  - NALC.
  - $\frac{\frac{1}{2}}{\frac{3}{4}}$ . NALR.
  - NALL.
- Overflow Relieves excessive (d) message delivery backlog and depletion of system resources.
  - Automatically activated and 1. deactivated by the system when threshold values are reached.
  - <u>2</u>. Messages are temporarily delivered to an SDU file.
  - Associated printouts notify 3. operator of the condition.
  - Pseudo line 65 is used to 4. accomplish this procedure.

#### Show Slide 12. NOTE:

- (3) Status Commands.
  - Provides status printouts of equipment and traffic status to the supervisor LPU.
  - (b) By adding a "space T" (R/U Comm) or "space Y" to the end of a STAT  $\,$ request, a supervisory statistics message can be sent to a predefined STAT RI list.
  - STATs that include information about channels will include twocharacter IDs to identify pseudo channels (channels used internally by the switch as opposed to terminal channels).
  - Each STAT command subparagraph (d) contains input format on right side with notes on left. At the end of

each command explanation is a format or explanation of the resulting printout.

NOTE: Show Slide 13. Message trace and retrieval commands will be covered in more detail in another lesson. Do a quick overview.

- (4) Message Trace and Retrieval. These commands will be discussed in greater detail in later lesson.
  - (a) TRAC prints a report of the events associated with a set of messages.
  - (b) RETR retrieves messages to the Traffic Service or to a set of original addressees; may print the trace report.
  - (c) CANT Cancels all pending and active retrievals caused by one or more TRAC commands.
  - (d) CANR Cancels all pending and active retrievals caused by one or more RETR commands..

NOTE: Show Slide 14. Refer to TM 11-5805-790-12-3, para 5-25.

- (5) Message Control
  - (a) CNCL Cancel a message on a specified outgoing channel.
  - (b) REJM Reject a message coming in on a specified channel.
  - (c) SCRB Remove an outgoing message for a designated channel. The delivery will never be made.
  - (d) RABM No longer necessary to monitor the answer back referred to in the OAB printout.
  - (e) RORB Used to retransmit a specific message delivery or all message deliveries currently on the orbit pseudo line.
  - (f) RDRT Used to reattempt delivery
     of the message referred to in the
     "All CRITIC Routes Blocked"
     printout.
  - (g) NLIM Used to remove a RI from "limbo" status.
  - (h) CMSG causes a system generated channel check message to be queued for output to the terminal

specified by the RI in the command. RI may be obtained using DABA commands, graphic display, or &nnn command.

(i) DRUP - allow/disallow dry-up of all input messages.

NOTE: Show slide 15. Configuration commands have already been covered. Do a quick review.

- (6) Configuration Commands Gives the supervisor the ability to adapt the system to changing conditions by changing the status of the system's devices. These commands were covered earlier in the course.
  - (a) CONN
  - (b) CONN TED
  - (c) DCON
  - (d) YAVL
  - (e) NAVL
  - (f) YIGN
  - (g) NIGN
  - (h) CLOS
  - (i) CLOS DBO
  - (j) OPEN DBI
  - (k) SDCN

NOTE: Show Slide 16. Refer to TM 11-5805-790-12-3, para 5-27.

- (7) Maintenance and Equipment Commands enable the supervisor to perform
  loopback tests, request equipment
  status, reset a modem, reset an MTG, and
  perform device self checks. These
  commands are mainly used by maintenance
  personnel but are useful for operators
  help when first installing a terminal
  line or trunk.
  - (a) LPBK especially used when installing a new channel to test switch's internal components of the signal line.
  - (b) DIAG Used to request automatic MCS/CCIU-type loopback tests on all in-service MCSs and the standby CCIU.
  - (c) ECMD REQS Used to request equipment status of a specified

device.

- (d) ECMD RSET Modem Used to put a reset a specified modem. Used when removing and replacing modems.
- (e) ECMD RSET MTG used to reset the master timing generator (MTG).
- (f) ECMD LPBM MODEM Used to put a specified modem in the loopback mode.
- (g) CHEK Used to perform device self-checks.
- (h) DPOC normally used by maintenance personnel. Useful when initializing MS to CS interface. (CS).

# NOTE: Show Slide 17. Refer to TM 11-5805-790-12-3, para 5-28.

- (8) On-line Table Generation used to initialize and modify parts of the site-specific data base.
  - (a) GOST writes database command (TGEN) to a database disk (DBD).
  - (b) NOST terminate writing of database to DBD.
  - (c) RICH Specifies input commands and passwords for online TGEN.
  - (d) RICH V SEC Required for security or ECP changes from VDT.

# NOTE: Show slide 18. Refer to TM 11-5805-790-12-3, para 5-29a through j. Show film "Z2-B01-LP11 Database print, DABA, before or after discussing DABA; running time 27:14.

(9) DABA - Database print commands generate all or part of the database book. When performed on line, current database information is printed.

#### NOTE: Show slide 19.

- (a) DABA ALL Prints all chapters of the DABA book. Does not print the glossary.
- (b) DABA SWIT Prints Chapter I, switch parameters.
- (c) DABA GCRI Prints chapter 2/General Collective RIs.
- (d) DABA CONN Prints chapter 1/Switch parameters.
- (e) DABA XREF LINE Prints chapter IV,

- RI/Line Cross Reference.
- (f) DABA XREF PHON Prints chapter V RI/Terminal Phone Number Cross Reference.
- (g) DABA LINE NN A Prints one line's classmarks; subsections depend on line type.
- (h) DABA LINE NN Prints one line's classmarks as listed in Chapter VI of DABA printout.
- (i) DABA RI XXXXXXX lists the classmarks, line number, phone number and trunk type of the RI entered.
- (j) DABA POTC Prints Chapter VII, potential classmarks. These include defined routing parameters that are not currently being used.

NOTE: Show slide 20. Refer to TM 11-5805-790-12-3, para 5-30a through c.

#### (10) Operator Directives

- (a) &SUP Allows one command to be input from the TSF or COM VDT. Saves time by avoiding changing modes to SYS-SUM for input of one supervisory command.
- (b) &nnn Displays designated channel information on individual status of the SSF or COM VDT.
- (c) &CLS Close SSF VDT. Used to create a combined VDT position which was TSF.

NOTE: Show Slide 21. Refer to TM 11-5805-790-12-3, para 5-31.

#### (11) Scrub procedures.

- (a) The message switch scrubs messages due to hardware problems, illogical software condition or database incompatibility.
- (b) Associated printouts are generated to assist the operator of the switch in determing who is responsible for the message.
- (c) SCR alarm is displayed on the SUPE VDT warning that a scrub has occurred.
- (d) A STAT SCR is printed at the end of the current RADAY to list resolved

and unresolved scrubs.

(e) SACK - command used by the operator after resolving a scrubbed delivery.

NOTE: Show slide 22. Refer to TM 11-5805-790-12-3, para 5-32.

- (11) Network Control Routing Reports.
  - (a) Generated by the system whenever a password change command, a STAT PAS command, or a command affecting routing is entered by the switch operator.
  - (b) Addressed to a predefined list of RIs created by using the CRRP command in the database.
  - (c) Intended at a minimum for the Network Controller or the person responsible for the maintaining of the database.
  - (d) Activated/deactivated by using NCRR command.

NOTE: Show Slide 23. Refer to TM 11-5805-790-12-3, para 5-33a and c.

(12) Abbreviated Cycle Commands - used when message accountability cannot be guaranteed. Associated printouts will indicate why an abbreviated cycle condition resulted.

NOTE: Refer to TM 11-5805-790-12-3, para 5-34.

(13) Cancel Printouts Command - Used to cancel all user-requested reports that are queued for printout.

NOTE: Refer to TM 11-5805-790-12-3, para 5-35.

(14) Continue with Single Control SDU Command. Allowed only when one control SDU is on-line.

QUESTION: What is the purpose of the DABA ALL command? (ANS: The DABA ALL command will print out the entire data base book.)

3H 57M

3. During this practical exercise observe students on their ability to perform the learning objective; coach, if necessary. Have two students work

together on equipment during the practical exercise. Students awaiting or having completed hands-on training will complete the written portion of the practical exercise. Rotate students by roster.

- a. Explanation to students.
  - (1) During this practical exercise you will practice using supervisory procedures associated with the AN/TYC-39 message switch. You will also answer 20 written questions.
  - (2) When you feel confident you are able to correctly perform 7 of 10 supervisory procedures within 1 hour, ask one of your instructors to evaluate your performance. When you have answered the 20 questions turn in to your instructor for grading.
  - (3) If you have no questions, you may start your exercise by reading and following the directions in your practical exercise.
- b. Application by students.
  - (1) Proceed to the training site when you are directed by your instructor.
  - (2) Perform the steps as they are sequenced in the application portion of the practical exercise.
  - (3) You will use your TMs to perform each individual step.

NOTE: Tell the students to carry the necessary TMs to the training site because they may be required to perform other steps along with the command and the situation given in the practical exercise.

c. Evaluation. Evaluate each student's ability to correctly enter 7 of 10 supervisory commands within 1 hour and correctly answer 14 of 20 questions within 1 hour.

9H 57M

#### **SUMMARY:**

You have now completed your training program on reintroduction of the AN/TYC-39(A). During your future assignments, you will be required to perform this procedure as well as other procedures. With the skills and knowledge learned during this training session, you will be successful in accomplishing this task.

10H

#### END

This document supports Task Numbers 113-583-2617, 113-583-2618, 113-583-2619, 113-583-2620, and 113-583-2621.

# U.S. ARMY SIGNAL CENTER AND FORT GORDON Fort Gordon, Georgia 30905-5180

#### LESSON PLAN

TITLE: Message Diversion

LEARNING

OBJECTIVES: ACTION: The student will perform assigned

message diversion procedures.

CONDITIONS: The student will be given an

AN/TYC-39(A), TMs 11-5805-790-12-2, -3, and -4, and practical exercise

260-ASIZ2/BO1-LP3-PE.

STANDARD: Acceptable performance is achieved

when the student can correctly perform commands to perform 14 of 20 message diversion procedures within 1 hour and correctly answer 7 of 10 written questions within 30

minutes.

SAFETY

CONSIDERATIONS: There are no safety considerations for this

lesson.

RISK

ASSESSMENT: Low.

RESOURCE NEEDS/

REFERENCES: AN/TYC-39(A), TMs 11-5805-790-12-2, -3, -4,

Practical Exercise 260-ASIZ2/BO1-LP3-PE, Overhead

Projector, and Slides.

METHODS OF

INSTRUCTION: Conference, Practical Exercise

TIME: 16 Hours

#### NOTES TO INSTRUCTOR:

1. Ensure all training resources are available.

 Ensure all safety procedures and practices are followed.

3. Ensure all equipment is operational.

1 APPROVAL DATE: 17 APR 98

DEVELOPER: MS SULLIVAN

DIV. CHIEF: Jack P. Row On

- 4. Evaluate students on their ability to perform the learning objective during the practical exercise.
- 5. At the end of the class, ensure all equipment is operational.

#### INTRODUCTION:

#### Elapsed Time

- 1. In planning your vacation this past summer, you sat down with your road map of the United States, Canada, and Mexico, and planned your traveling routes. On the open highway you discovered you must make detours or diversions due to highway maintenance, new construction, or natural disasters. You are forced to choose a different route to arrive at your destination. This holds true for military communications routes, we also have to detour traffic or choose a method of diversion.
- 2. This lesson will teach you the skills, knowledge, and procedures necessary for you to perform message diversion for the AN/TYC-39(A). You will learn the procedures to follow when you are diverting messages. You will then practice using these procedures to operate the AN/TYC-39(A) until you have demonstrated the ability to correctly perform commands to perform message diversion on 14 of 20 within 1 hour and correctly answer 7 of 10 questions within 30 minutes.
- 3. Let us begin our study by briefly discussing the purpose and use of different diversion methods as used with the message switch AN/TYC-39(A).

#### 3M BODY:

#### Elapsed Time

1. Message diversion.

NOTE: Show Slide 1. Refer to TM 11-5805-790-12-3, paragraph 5-18.

- a. Message diversion is the sending of a message to other than its intended destination.
- b. There are four types of message diversions used in the message switch.
  - (1) Reintroduction.
    - (a) Used if MS or terminal is closing down for a long period of time such as relocation.

- (b) Prevents unnecessary delivery delays.
- (c) Used on a community by community basis.

#### (2) Intercept.

- (a) Used if MS or terminal is shutting down for a shorter period of time such as for minor maintenance.
- (b) Messages are delivered to intercept file of MS SDU for later delivery.
- (c) Used on a community by community basis.

#### (3) Alternate routing.

- (a) Used for a terminal that has a backlog of messages or is down for a very short period of time.
- (b) Can be used to divert messages for a channel or a router to another destination.

#### (4) Overflow.

- (a) Automatically processor initiated based on worst-backlogged lines.
- (b) REIN, IC, or ALT can affect whether messages are subject to overflow.
- (c) Overflow parameters are set by using TGEN commands to set backlog thresholds.
- c. Message diversion procedures can be used to remove messages from the limbo line.
  - (1) The limbo line is a special output line (internal pseudo switch line) used to queue message deliveries which are suspended.
  - (2) Messages cannot be removed from the limbo line without operator intervention.
- d. Precedence of diversions.
  - (a) REIN.
  - (b) IC.
  - (c) ALT.

NOTE: Show Slide 2.

- e. Status commands to identify message diversions.
  - (a) STAT DIV.

Used to identify any type of diversion on all channels of the switch (existing or nonexistent).

(b) STAT ALT.

Used to identify any type of altroute a particular router or channel is serving.

(c) STAT SYS.

Used to print a system status which among other things will include Altroute and intercept information.

(d) STAT ICA.

Used to print a status of active intercept commands.

(e) STAT MSS.

Used to print a message status summary which will include overflow and intercept usage.

What is message diversion? (ANS: The sending of a message to other than its intended destination.)

2. Reintroduction.

 $\frac{\text{NOTE}}{\text{NOTE}}: \quad \text{Refer students to TM 11-5805-790-12-3,} \\ \quad \text{paragraph 5-19.}$ 

- a. The reintroduction of all traffic causes all traffic to be sent to a predefined R/U/Y community reintroduction RI.
- b. The RI for each community must predefined for each community using TGEN command "REIN ADD ALL" served by the message switch to set

reintroduction for the complete switch and "REIN ADD" for an individual RI.

- c. Allows traffic from AUTODIN back to AUTODIN by changing addressee from a tactical RI to a garrison RI.
- d. Use GORN or GORN ALL to activate the reintroduction of traffic
- e. Reintroduction command formats.

#### NOTE: Show Slide 3.

#### (1) GORN<sup>\*</sup>xxxx..x

- (a) Use GORN command to allow all messages (except CRITIC and single card) addressed to particular RI to be re-addressed to its predefined REIN RI.
- (b) A new header containing the REIN RI is created by the system and is prefixed to each delivered message.
- (c) Service message is sent to the OSRI to indicate the message was reintroduced.

#### (2) GORN^ALL.

- (a) Use GORN ALL command to allow all messages (except CRITIC and single card) to be reintroduced into the system.
- (b) System REIN RIs must be previously defined for each community.
- (c) The GORN ALL command deactivates all previous GORN commands, and disallows all future GORN commands until a NORN ALL command is issued.
- (d) This command activates the REIN ALL ACTIVE (RAL) alarm.
- (e) No service messages go to OSRI.

#### (3) NORN^xxxx..x

Use NORN command to end all reintroduction of messages for the given routing indicator.

#### (4) NORN^ALL.

(a) Use NORN ALL command to end all reintroduction of all messages.

- (b) This command causes the active alarm (RAL) to be removed.
- (c) A GORN ALL command must have been given previously.

QUESTION: What happens for an individual reintroduction that does not happen for the reintroduction of all traffic? (ANS: A REIN service message is delivered to the originator.)

#### 3. Intercept.

- a. This capability relieves or prevents excessive message backlog by allowing "delivery" to an intercept SDU file.
- b. When intercept is activated messages are linked to intercept pseudo line 64 and to an SDU file. They are stored for later delivery.
- c. CRITC, high-precedence answer backs, messages addressed to the TSP and mode II ACK may not be intercepted.

#### NOTE: Show Slide 4.

- d. Intercept command formats.
  - (1) GOIC pr xxx...x ..... xxx...x
    - (a) Intercept messages for RIs by precedence only.
    - (b) Will intercept for specified precedence level and below.
    - (c) Up to eight RIs can be listed in the command.
    - (d) As a result of this command, any previously intercepted messages which are no longer subject to intercept are automatically returned from intercept.
  - (2) GOIC pmr xxx...x ..... xxx...x
    - (a) Intercept messages for RIs by precedence and medium.
    - (b) Will intercept for specified precedence level and below.
    - (c) Up to eight RIs can be listed in the command.
    - (d) Only messages having the preferred output medium are affected.
    - (d) As a result of this command, any

previously intercepted messages which are no longer subject to intercept are automatically returned from intercept.

#### (3) GOIC pl xxx ... xxx

- (a) Intercept messages for channels by precedence only.
- (b) Will intercept for specified precedence level and below.
- (c) Used only for dedicated, quasidedicated, CSEL, and limbo lines.
- (d) Up to 17 channels can be listed in the command.
- (e) As a result of this command, any previously intercepted messages which are no longer subject to intercept are automatically returned from intercept; deactivates interception.

#### (4) GOIC pml xxx ... xxx

- (a) Intercept messages for channels by precedence and medium.
- (b) Will intercept for specified precedence level and below.
- (c) When medium is specified, only messages having that preferred output medium are affected.
- (d) Used only for dedicated, quasidedicated, CSEL, and limbo lines.
- (e) Up to 17 channels can be listed in the command.
- (f) As a result of this command, any previously intercepted messages which are no longer subject to intercept are automatically returned from intercept; deactivates interception.

#### (5) NOIC r xxx...x ..... xxx...x

- (a) Used to remove messages for one or more RIs from intercept line 64. Returns messages to their normal delivery lines.
- (b) Up to eight RIs may be specified.
- (c) Any channel intercept will remain in effect if at least on RI intercept is still active; otherwise the channel IC is also removed.

- (6) NOIC 1 xxx ... xxx
  - (a) Used to remove one or more channels from intercept line 64. Returns messages to their normal delivery lines.
  - (b) Up to 17 lines may be specified.
- (7) NOIC ALL.

Removes all intercepts.

QUESTION: When intercept is in effect where are the messages delivered? (ANS: To an SDU file via pseudo line 64.)

4. Altrouting.

NOTE: Refer students to TM 11-5805-790-12-3, paragraph 5-21.

- a. This capability permits message deliveries to be made under abnormal conditions, such as or excessive message backlog on line or router.

  Messages are still delivered but to another destination.
- b. A network control routing report is sent when alrouting is activated/deactivated.
- c. During alrouting, messages awaiting delivery shall be transmitted over the new route without reprocessing. The new destination should:
  - (1) Be physically capable of receiving messages that would have gone to original destination.
  - (2) Be cleared to receive the traffic.
  - (3) Be the same community.
  - (4) In general, have at least the same capabilities of the original terminal.
- d. CRITIC and messages addressed to the traffic service position may not be altrouted.

NOTE: Show Slide 5. Refer students to TM 11-5805-790-12-3 paragraph 5-21a thru p.

e. Illegal altroutes can cause undeliverable message to be delivered to the limbo line.

NOTE: Show Slide 6. Refer students to TM 11-5805-790-12-3 paragraph 5-21a thru p.

- f. Altroute command formats.
  - (1) ALTR^A^xxxx..x^xxxx..x
    - (a) Message alternate routing of a RI for all precedence and all media.
    - (b) Must not be currently altrouted.
  - (2) ALTR As xxxx..x xxxx..x
    - (a) Message alternate routing of a RI up to a given precedence and all media with security classification.
    - (b) Cannot be currently altrouted for any reason.
  - (3) ALTR p xxxx..x xxxx..x
    - (a) Message alternate routing of a RI which have certain precedence levels.
    - (b) Alrouting for other precedence is the only preexisting altroute allowed.
  - (4) ALTR ps xxxx..x xxxx..x
    - (a) Message alternate routing of a RI which have certain precedence levels and which have up to a given security classification.
    - (b) Alrouting for other precedence is the only preexisting altroute allowed.
  - (5) ALTR m xxxx..x xxxx..x
    - (a) Message alternate routing of a RI which have certain preferred output.
    - (b) Alrouting for other media is the only type of preexisting altroute allowed.
  - (6) ALTR ms xxxx..x xxxx..x
    - (a) Message alternate routing of a RI which have certain preferred output medium and which have up to a given security classification.
    - (b) Alrouting for other media is the

only type of preexisting altroute allowed.

#### NOTE: Show Slide 7.

#### (7) ALTC^A^xxx^xxxx..x

- (a) Queued message alternate routing of a channel for all precedence and all media.
- (b) Channel must not be currently altrouted.
- (c) RIs for that channel may have a preexisting altroute or intercept.
- (d) At least one RI must be assigned to the channel.

#### (8) ALTC^As^xxx^xxxx..x

- (a) Queued message alternate routing of a channel for all precedence and all media with a security option.
- (b) Channel must not be currently altrouted.
- (c) RIs for that channel may have a preexisting altroute or intercept.
- (d) At least one RI must be assigned to the channel.

#### (9) ALTC^p^xxx^xxxx..x

- (a) Queued message alternate routing of a channel for certain precedence levels.
- (b) Altroute of this channel for other precedence levels is the only type of preexisting altroute allowed.
- (c) At least one RI must be assigned to the channel.

#### (10) ALTC^ps^xxx^xxxx..x

- (a) Queued message alternate routing of a channel for certain precedence levels and given security classification.
- (b) Altroute of this channel for other precedence levels is the only type of preexisting altroute allowed.
- (c) At least one RI must be assigned to the channel.

#### NOTE: Show Slide 8.

#### (11) NALR A xxxx..x

- (a) Discontinue alternate routing of a routing indicator.
- (b) Used to stop ALTR A xxxx.xx or ALTR As xxxx..xx.

#### (12) NALR m xxxx..x

- (a) Discontinue alternate routing of a routing indicator for certain preferred output medium.
- (b) Used to stop ALTR m xxxx.xx or ALTR ms xxxx..xx.

#### (13) NALR p xxxx..x

- (a) Discontinue alternate routing of a routing indicator for certain precedence levels.
- (b) Used to stop ALTR p xxxx.xx or ALTR ps xxxx..xx.

#### (14) NALC A xxx

- (a) Discontinue alternate routing of all messages for a channel.
- (b) Used to stop ALTC A xxx or ALTC As xxx.

#### (15) NALC p xxx

- (a) Discontinue alternate routing of all messages for a channel which have a certain precedence levels.
- (b) Used to stop ALTC p xxx or ALTC ps xxx.

#### (16) NALL xxx

- (a) Discontinue alternate routing of all messages for a channel.
- (b) Used to stop all altroutes regardless of what command originally defined them.

#### QUESTIONS:

Can intercept statuses coexist with any altroute function? (ANS: Yes, it can.)

If a RI associated with a channel is intercepted for a precedence of priority, will an ALTC 3 command change the status of that RI? (ANS: The ALTC 3 command will not change the status of the RI since intercept

functions take precedence over altroute functions.)

What set of circumstances would cause the operator to invoke alternate routing of a routing indicator (RI)? (ANS: Abnormal conditions and failed transmission facilities; used to prevent or relieve excessive backlog.)

#### NOTE: Show Slide 9.

#### 5. Overflow

- a. Overflow is initiated automatically by the message switch (MS) and affects individual messages.
- b. Overflow is based on worst-backlogged lines, so the eventual (after REIN, IC, or ALT) routing of a message can affect whether it is subject to overflow.
- c. When overflow occurs messages are linked to pseudo line 65 and to an SDU file.
- c. Associated system printout results when automatic activation or deactivation of the overflow function occurs.
- d. OVFT command is used to set upper and lower threshold levels. If command is not used database defaults to preset values.

#### QUESTIONS:

When does overflows occur? (ANS: Overflow is based on worst-backlogged lines and occurs when messages exceed preprogrammed threshold levels.)

#### 3H 57M

- 6. Practical exercise. During the practical exercise, observe the students on their ability to perform the learning objective; coach, if necessary. Have two students work together on equipment during the practical exercise. Students awaiting or having completed hands-on training will complete the written portion of the practical exercise. Rotate students by roster.
  - a. Explanation to students.
    - (1) During this practical exercise you will practice using command procedures associated with message diversion.

- (2) When you feel confident you are able to correctly perform 14 of 20 procedure associated with message diversion within 1 hour and correctly answer 7 of 10 questions within 30 minutes, ask one of your instructors to evaluate your performance.
- (3) If you have no questions, you may start your exercise by reading and following the directions in your practical exercise.
- b. Application by students.
  - (1) Proceed to the training site when you are directed by your instructor.
  - (2) Perform the steps as they are sequenced in the application portion of the practical exercise.
  - (3) You will use your TMs to perform each individual step.
- c. Evaluation. Evaluate each student's ability to correctly perform 14 of 20 message diversion procedures within 1 hour and correctly answer 7 of 10 questions within 30 minutes.

15H 57M

**SUMMARY:** 

You have now completed your training program on message diversion of the AN/TYC-39(A). During your future assignments, you will be required to perform these procedures as well as other procedures. With the skills and knowledge learned during this training session, you will be successful in accomplishing this task.

16H

END

This document supports Task Number 113-583-2617.

# U.S. ARMY SIGNAL CENTER AND FORT GORDON Fort Gordon, Georgia 30905-5180

#### LESSON PLAN

TITLE: Message Trace and Retrieval Procedures

LEARNING

OBJECTIVE: ACTION: The student will trace and retrieve

messages in the AN/TYC-39(A).

CONDITIONS: The student is given TM-11-5805-790

12-3, an AN/TYC-39A, and all other

materials as required.

STANDARD: Acceptable performance is achieved

when the student correctly traces and retrieves a message from the AN/TYC-39(A), in accordance with

the TM.

SAFETY

CONSIDERATIONS: There are no safety considerations for this

lesson.

RISK

ASSESSMENT: Low.

RESOURCE NEEDS/

REFERENCES: Overhead Projector, Slides 1 Through 19,

TM-11-5805-790-12-1, TM 11-5805-790-12-3, JANAP 128(I), AN/TYC-39A, 2 AN/UGC-144 Terminals, or 2

AN/UGC-74, or a combination of both.

METHODS OF

INSTRUCTION: Conference, Practical Exercise

TIME: 15 Hours

#### NOTES TO THE INSTRUCTOR:

1. Ensure that the classroom is available and properly set up and that all equipment and training resources are available and in working order.

- 2. Ensure that enough technical manuals are available and account for all transparencies.
- 3. State all safety notes as they appear throughout

260-AIZ2/B01-LP4 1 APPROVAL DATE: 17 APR 98 DEVELOPER: MS SULLIVAN

DIV. CHIEF: Jack P. Row On

the lesson plan.

original addresses.

#### INTRODUCTION:

# Elapsed 1. In this lesson, we will study the AN/TYC39A Time message trace and retrieval procedures. The trace commands allow you to trace events associated with a set of messages selected by certain input or output criteria. Retrieval is the process of retrieving messages to traffic service and/or the

2. The performance exercise portion of this lesson will enable you to apply what you have learned about message trace and retrieval process.

#### BODY:

- 1. Purpose and use.
  - a. TRAC prints a report of the events associated with a set of messages. Normally there are only two reasons for Traces:
    - (1) Non-delivery claim by one or more addressees.
    - (2) To determine an inordinate amount of delay on a message(s).
  - b. RETR retrieves messages to traffic service and/or to a set of the original addressees.
    - (1) Reasons for Retrieval include but are not limited to garbled or incomplete messages, etc.
    - (2) Retrieval must be requested or approved for retransmission by proper authority.
  - c. There are five input and three output types of TRAC/RETR commands.
  - d. Trace report has one input row for each message assigned serial number (ASN) that includes OSRI, OSSN, ASN, input time, and so forth.
  - e. For each relevant output event of the message, an output row contains delivery, printout of service message data including routing indicators (RIs), delivery time, and so forth.
  - f. The following equipment is required to run a

#### TRAC/RETR:

- (1) Three SDUs, (control, historyl and histroy2).
- (2) One VDT.
- (3) One LPU.
- g. When TRAC/RETR begins, the SDUs should not be tampered with (powered off or removed) until the message has been located for retrieval.

QUESTIONS:

What are the only two reasons for a TRAC?

(ANS: Non-delivery claim or inordinate delay).

What equipment is required to run a TRAC/RETR command? (ANS: Three SDUs, one VDT and one LPU).

2. Trace/Retrieval Procedures

NOTE: Refer students to TM 11-5805-790-12-3, paragraph 5-24, page 5-172.

- a. Command ranges are inclusive of the left and right limits. If the right limit is omitted it will default to equal the left limit.
- b. Available data for a trace report include data that has not been overwritten by new data.
- c. A command is limited to two VDT lines.
- d. TRAC/RETR scans SDUs from newest data, (right limit or upper limit), back to oldest data, (left limit or lower limit).
- e. If the commands left/right range is too wide, the work space may fill, and the report may end short of the command's left limit. A decision would have to be made whether enough data was obtained or if another smaller trace is required.
- f. Data may be too old to access or can't be accessed because of an SDU read error, (normally four days is the limit, but depending on traffic load, it could be shorter or longer).

QUESTION: How many VDT lines is a command limited

to?

(ANS: Two).

TRAC/RETR scans SDUs from \_\_\_\_ data to
\_\_\_\_ data?
(ANS: Newest data to oldest data).

3. Canceling or Continuing Trace/Retrieval Commands

NOTE: Refer students to TM 11-5805-790-12-3, paragraph 5-24, page 5-172.

- a. TRAC/RETR commands with OSSN and CSN find the most recent occurrences of OSSN and CSN. Since more than one instance of these parameters can occurs, the TRA alarm allows the operator to decide whether or not to continue a TRAC/RETR.
- b. TRA alarm flashes on when the left limit is found for a TRAC/RETR command with OSSN or CSN.
- c. A complete trace report is printed for the current command.
- d. Operator must acknowledge the TRA alarm with either a CONT Y or CONT N.
- e. If a RETR command is entered with the N option, (no print), the TRA alarm will not flash.
- f. CANT/CANR used to cancel TRAC/RETR. CANT cancels all traces. CANR cancels all retrievals.

CANT/CANR can't cancel automatic traces and retrievals.

OUESTION:

What does the TRA alarm allow an operator to do?

(ANS: TRA alarm allows an operator to decide whether or not to continue a TRAC/RETR).

How must an operator acknowledge a TRA
alarm?
(ANS: With either a CONT Y or CONT N).

- 4. TRAC/RETR Print Delivery Specifications
  - a. TRAC print/delivery specifications are

# optional:

- (1) S = (short) to print a trace report without data or printout events.
- (2) L = (long) to print the trace report with MCB data and printout events.
- (3) Rilist = to print a subset of addressees.
  - (a) These addresses may be individual Ris or collective members.
  - (b) Listed Ris that are not addresses are ignored.
  - (c) If rilist is entered, enter S or L before the list.
- b. RETR print/delivery specifications are mandatory:
  - (1) S = (short) to print a trace report without data or printout events.
  - (2) L (long) to print the trace report with MCB data and printout events.
  - (3) N = (none) to not print the trace report at all.
  - (4) ALL = to retrieve to all addressees.
  - (5) Rilist = to print a subset of addressees.
    - (a) These addresses may be individual Ris or collective members.
    - (b) Listed Ris that are not addresses are ignored.
    - (c) If Rilist is entered, enter S or L before the list.
- c. Optional Print Commands for RETR
  Print/Delivery:
  - (1) Enter TSH for message headers only to Traffic Service Position.
  - (2) Enter TSM to send entire message to Traffic Service Position.
    - (a) If TSM is used, a valid "Y" password must be used for SPECAT/Y Community text to Traffic Service.
    - (b) If password is not used then only the headers of SPECAT/Y Community messages will appear at the Traffic Service position, while other messages will be printed entirely.
    - (c) Messages retrieved by RETR are

always automatically SUS DUP'd.

#### QUESTION:

Are RETR print/delivery specifications mandatory? What about TRAC? (ANS: Yes, print/delivery specifications are mandatory for RETR; No, they are optional for TRAC).

Using the RETR command, what should be entered in the print/delivery specifications so that only message headers are sent to the Traffic Service position?

(ANS: TSH).

5. Message Trace Commands:

# NOTE: Show Slide 1.

- a. TRAC asn1 (asn2) (S/L) (rilist).
  - (1) Use this command when requesting a message trace using an ASN range.
  - (2) This command traces available messages accepted, rejected, or cancelled on input with ASN between asn1 and asn2.
    - (a) Trace starts at upper limit (asn2) and proceeds back to asn1.
    - (b) Enter nothing or S to print report without MCB data or L to print with MCB data.

## NOTE: Show Slide 2.

- b. TRAC I In/ri csn1 (csn2) (S/L) (rilist).
  - (1) Use this command when requesting a message trace on messages input from a channel or CS/DA RI using a CSN range.
  - (2) This command traces messages accepted, rejected, or cancelled on input from a channel or CS/DA RI with CSN between csn1 and csn2.
    - (a) Starts a csn2 and proceeds back to csn1.
    - (b) TRA alarm is issued when csn1 is found.
    - (c) Enter either line (channel) number (IN) or routing indicator.
    - (d) Enter nothing or S to print report

without MCB data or L to print report with MCB data and printout events.

# NOTE: Show Slide 3A through 3B.

- c. TRAC I In/mn/ri ddd1 hhmm1 (ddd2 hhmm2) (S/L) (rilist).
  - (1) Use this command when requesting a trace on input from a channel or CS/DA using at time range.
  - (2) This command traces available messages accepted, rejected, or cancelled on input rom a channel or CS/DA RI between ddd1 hhmm1 and ddd2 hhmm2.
    - (1) Trace starts at last date/time (ddd2 hhmm2) and proceeds back to ddd1 hhmm1.
    - (2) Time range can't include current time, and is assumed to refer to a period within a one-year period.
    - (3) Enter line number, routing indicator or pseudo channel.
- d. TRAC O In/ri csn1 (csn2) (S/L) (rilist)
  - (1) Use this command when requesting a message trace on messages delivered to a channel or CS/DA RI using a CSN range.
  - (2) This command traces available deliveries completed, cancelled, or scrubbed on output to a channel or CS/DA RI with CSN between csn1 and csn2.
    - (a) Trace starts at csn2 and proceeds back to csn1.
    - (b) TRA alarm is issued when csn1 is found.
    - (c) Enter either line (channel) number
       (in) or routing indicator.
    - (d) Enter nothing or S to print a report without MCB data or L to print report with MCB data.

## NOTE: Show Slide 4.

- e. TRAC osri ossn1 (ossn2) (S/L) (rilist)
  - (1) Use this command when requesting a trace using OSRI and OSSN range.
  - (2) This command traces available messages

accepted, rejected, or cancelled on input with OSRI and OSSN between ossn1 and ossn2.

- (a) Trace starts at ossn2 and proceeds back to ossn1.
- (b) TRA alarm is issued when ossn1 is found.
- (c) Enter nothing or S to print report without MCB data or L to print report with MCB data.
- (d) When message cited is in ACP-127 format, the OSRI and OSSN are constructed by the MS using the ACP relay combined with the incoming channel designator and CSN with a leading zero.
- f. TRAC O osri dddl hhmml (ddd2 hhmm2) (S/L) (rilist).
  - (1) Use when requesting trace using OSRI during a certain time period.
  - (2) This command traces available messages with OSR osri accepted, rejected, or cancelled on input between dddl hhmml and ddd2 hhmm2.
    - (a) Starts at last date and time (ddd2 hhmm2) and proceeds back to ddd1 hhmm1.
    - (b) Time range can't include current time and is assumed to be within a one-year period.
    - (c) Enter nothing or S to print report without MCB data or L to print report with MCB data.
    - (d) When message cited is in ACP-127 format, the OSRI and OSSN are constructed by the MS using the ACP relay combined with the incoming channel designator and CSN with a leading zero.
- 6. Message Retrieval Commands.

NOTE: Show Slide 7A through 7B.

- a. RETR asn1 (asn2) S/L/N (rilist/ALL) (TSM/TSH) (password).
  - (1) Use this command when requesting a message retrieval using an ASN range
  - (2) This command retrieves available

messages accepted, rejected, or cancelled on input with ASN between asn1 and asn2.

- (a) Trace starts at upper limit (asn2) and proceeds to asn1.
- (b) RETR print/delivery specifications are mandatory. An S, L, or N: S to print the report without MCB data, L to print report with MCB data or N to not print report.
- (c) Enter ALL to retrieve to all addressees, or rilist to retrieve to a subset of addressees.
- (d) Optionally enter TSH to send message headers only to Traffic Service, or TSM to send entire message to Traffic Service.

# NOTE: Show Slide 8A through 8B.

- b. RETR I In/mn/ri ddd1 hhmm1 (ddd2 hhmm2) S/L/N
   (rilist/ALL) (TSM/TSH) (password).
  - (1) Use this command to retrieve messages input from a channel or CS/DA RI between specified times.
  - (2) This command retrieves available messages accepted, rejected, or cancelled on input from a channel or CS/DA RI between specified times.
    - (a) Trace starts at last date and time (ddd2 hhmm2) and proceeds back to ddd1 hhmm1.
    - (b) Time range cannot include the current time, and is assumed to refer to a period within the oneyear period ending now.
    - (c) Enter one of these: line (channel)
       number (In), routing indicator
       (ri), or a mnemonic for pseudo
       channels (mn).
    - (d) All print specifications are the same, S, L, or N.
    - (e) ALL is also the same.
    - (f) TSH and TSM are used the same except that if TSM is used, a valid "Y" password to deliver SPECAT/Y Community traffic must be used or only the header will be sent to traffic service.
  - c. RETR I In/ri csn1 (csn2) S/L/N

(rilist/ALL) (TSM/TSH) (password).

- (1) Use this command to request message retrieval on messages input from a channel or CS/DA RI using a CSN range.
- (2) This command retrieves available messages accepted, rejected, or cancelled on input from a channel or CS/DA RI with CSN between csn1 and csn2.
  - (a) Trace starts at (csn2) and proceeds back to csn1.
  - (b) TRA alarm is issued when csn1 is found.
  - (c) Enter either line (channel) number (In) or routing indicator (ri).
  - (d) RETR print/delivery specifications are mandatory and are the same as previously stated.
  - (e) ALL is used in the same manner as previously stated.
  - (f) TSH and TSM are used in the same manner as previously stated.
- d. RETR O In/mn/ri asn1 (asn2) S/L/N
   (rilist/ALL) (TSM/TSH) (password).
  - (1) Use this command when requesting a message retrieval on messages input from a channel or CS/DA RI using an ASN range.
  - (2) This command retrieves available message deliveries completed, cancelled, or scrubbed on output to a channel or CS/DA RI with ASN between asn1 and asn2.
    - (a) Trace starts at (asn2) and proceeds to asn1.
    - (b) TRA Alarm is issued when asn1 is found.
    - (c) Enter line (channel) number (In),
       routing indicator (ri), or a
       mnemonic for pseudo channels (mn).
    - (d) RETR print/delivery specifications are used as previously stated.
    - (e) ALL is used as previously stated.
    - (f) TSH/TSM are used as previously stated.

NOTE: Show Slide 9A through 9B.

e. RETR O In/mn/ri ddd1 hhmm1 (ddd2 hhmm2) S/L/N

# (rilist/all) (TSM/TSH) (password)

- (1) Use this command when requesting a message retrieval on output to a channel or CS/DA RI using a range of time.
- (2) This command retrieves available message deliveries completed, cancelled, or scrubbed on output to a channel or CS/DA RI between ddd1 hhmm1 and ddd2 hhmm2.
  - (a) Trace starts at last date and time (ddd2 hhmm2) and proceeds back to ddd1 hhmm1.
  - (b) Time range cannot include the current time, and is assumed to refer to a period within the oneyear period ending now.
  - (c) Enter either line (channel) number
     (In), routing indicator (ri), or a
     mnemonic for pseudo channels (mn).
  - (d) RETR print/delivery specifications are used as previously explained.
  - (e) All is used as previously explained.
  - (f) Optionally enter TSH/TSM, they are used as previously explained.
- f. RETR O In/ri csn1 (csn2) S/L/N (rilist/ALL) (TSM/TSH) (password).
  - (1) Use this command when requesting a message retrieval on messages input from a channel or CS/DA RI using CSN range.
  - (2) This command retrieves available message deliveries completed, cancelled, or scrubbed on output to channel or CS/DA RI with CSN between csn1 and csn2.
    - (a) Trace starts at (csn2) and proceeds back to csn1.
    - (b) TRA alarm is issued when csn1 is found.
    - (c) Enter either line (channel) number
       (ln) or routing indicator (ri).
    - (d) RETR print/delivery is used as previously explained.
    - (e) ALL is used as previously explained.
    - (f) TSH/TSM is used as previously explained.
- g. RETR osri ddd1 hhmm1 (ddd2 hhmm2) S/L/N

(rilist/ALL) (TSM/TSH) (password).

- (1) Use this command when requesting a message retrieval using the OSRI and a range of time.
- (2) This command retrieves available messages accepted, rejected, or cancelled on input with OSRI and between times ddd1 hhmm1 and ddd2 hhmm2.
  - (a) Trace starts at last date and time (ddd2 hhmm2) and proceeds back to ddd1 hhmm1.
  - (b) Time range cannot include the current time, and is assumed to refer to a period within the oneyear period ending now.
  - (c) When the message being cited is received in ACP-127 format, the OSRI and OSSN are constructed by the MS using the ACP relay.
  - (d) RETR print/delivery is used as previously explained.
  - (e) ALL is used as previously explained.
  - (f) TSH/TSM is used as previously explained.

# NOTE: Show Slide 10A through 10B.

- h. RETR osri ossn1 (ossn2) S/L/N (rilist/ALL) (TSM/TSH) (password).
  - (1) Use this command when requesting a message retrieval using the OSRI and an OSSN range.
  - (2) This command retrieves available messages accepted, rejected, or cancelled on input with OSRI and OSSN between ossn1 and ossn2.
    - (a) Trace starts at (ossn2) and proceeds back to ossn1
    - (b) TRA alarm is issued when ossn1 is found
    - (c) RETR print/delivery is used as previously explained.
    - (d) ALL is used as previously explained.
    - (e) TSH/TSM is used as previously explained.
    - (f) When message received in ACP 127

format, the OSRI and OSSN are constructed by the MS using the ACP relay combined with the incoming channel designator and CSN with a leading zero.

7. Message Trace/Retrieval/Continue/Cancel Commands.

NOTE: Show Slide 11.

a. Cont Y.

Use this command to acknowledge the TRA alarm and continue the trace for earlier part of the data.

- (1) NAKed if TRA alarm off.
- (2) Turns off the TRA alarm and continues trace search.

NOTE: Show Slide 12.

b. CONT N.

Use this command to acknowledge the TRA alarm and end trace.

- (1) NAKed if TRA alarm off.
- (2) Turns off the TRA alarm. Trace report is complete. Begins next trace if any given.
- (3) If trace resulted from retrieval command, retrievals are done as indicated in trace report.

NOTE: Show Slide 13.

c. CANT.

Use this command to cancel trace(s).

- (1) Cancels active TRAC, unless in progress.
- (2) Cancels queued TRAC commands that haven't begun.
- (3) CANT does not cancel automatic traces.
- (4) NAKed if there are no pending traces.
- (5) Turns off TRA alarm if present.

NOTE: Show Slide 14.

d. CANR.

Use this command to cancel retrieval(s).

- (1) Cancels active RETR command if it hasn't began.
- (2) Cancels queued RETR commands that haven't begun.
- (3) Cancels all pending and active operator requested retrievals for traces that have been completed.
- (4) CANR does not cancel automatic retrievals.
- (5) NAKed if there are no pending retrievals.
- (6) Turns off TRA alarm if present.

### 8. Trace Report.

- a. Trace report shows message related events that were requested automatically or by a TRAC/RETR command.
- b. For each message (ASN), one input row of data is printed, followed by one or more output rows of data.
- c. If L (long) is entered, MCB data appears after each input and out put row.

NOTE: Show Slide 15A through 15E and refer students to TM 11-5805-790-12-3, paragraph 5-24(u), pages 5-204-5-208 for explanation.

NOTE: Recapitulate key points. Ask questions to ensure student understanding of material covered. Ensure that there are no questions on the material covered.

2H 57M

9. Practical Exercise. During the practical exercise, observe the students on their ability to perform the learning objective; coach, if necessary. Have two students work together on equipment during the practical exercise. Students awaiting or having completed hands-on training will complete the written portion of the practical exercise.

14H 57M

#### **SUMMARY:**

In this lesson, we discussed the procedures for performing message trace and retrieval. The performance exercise portion of this lesson will enable you to practice what you learned in this lesson while performing these procedures in a hands-on learning environment.

15H

END

This document support Task Number 113-583-2617.